Applicant has accordingly been required, in view of the finality of the Office action, to file this continuing application with the new evidence residing in his earlier misplaced published paper (a preliminary rough draft of parts of which served as the basis for counsel drafting the present application), entitled "A highly accurate, low cost test for BRCA 1 mutations" appearing in *J Med Genet* 1999; 36: 747-753, accepted for publication 21 June, 1999. A copy of this paper is herewith annexed.

The applicant makes this of record to make clear that applicant is not intentionally delaying the prosecution of this application by this continuing filing, but that applicant and counsel are diligently trying to address and satisfy the new requirements advanced by the Office to attain allowance of the application.

In the Specification

The parent application has been amended as follows:

Please delete from the substitute specification herein, "SEQ ID NOS 121 and 122" in the clamping sequence listings as erroneously inadvertently listed. A corrected copy of the clamping sequence listings is attached hereto.

In the Claims

Claim 10 has been rewritten as follows:

--10. (Rewritten) A method of detecting mutations in BRCA1 genes comprising providing PCR primers capable of amplifying the entire coding sequence of the BRCA1 genes; amplifying a test sample containing nucleotide sequences by long distance multiplex PCR with exon fragments numbered 10-11, 12-13, 14-17, 18-20, and 21-24, using primer sequences SEQ ID Nos. 37 and 38, 39 and 40, 41 and 42, 43 and 44, and 45 and 46, respectively, producing a first set of amplification products; subjecting this first set of amplification products to short distance multiplex PCR to produce a second set of amplification products with exon fragments numbered 11.1 F and R through 11.16 F and R, using primer sequence pairs SEQ ID Nos. 47 and 48 through 77 and 78, respectively, and exon fragments numbered 2 F and R through 10 F and R, and 12 F and R through 24 F and R, using primer sequence pairs SEQ ID Nos. 79 and 80 through 119 and 120, respectively, and with clamping and linking sequences therefor for effecting said short distance multiplex PCR; and subjecting the second set of amplification products to two-dimensional gel electrophoresis to produce a characteristic spot pattern for a specific mutation in the BRCA1 gene.--